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BULLETIN No. 54

BUREAU OF EDUCATIONAL RESEARCH
COLLEGE OF EDUCATION

Proceedings of the Annual Conference of the Faculty of the College of Education, University of Illinois, With the Superintendents of the Schools of Illinois

Urbana, Illinois
November 20, 1930

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The results of original investigations carried on by the Bureau of Educational Research are published in the form of bulletins. A list of available publications is given on the back cover of this bulletin. At the present time five or six original investigations are reported each year. The accounts of research conducted elsewhere and other communications to the school men of the state are published in the form of educational research circulars. From ten to fifteen of these are issued each year.

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PREFACE

This bulletin presents a series of addresses by members of the faculty of the College of Education at the Annual Conference of Superintendents of Schools of Illinois, Thursday afternoon, November 20, 1930. The central theme of these papers is "Progressive Trends in American Education." Since this is a timely topic, it has seemed worth while to make these addresses available to a larger audience.

WALTER S. MONROE, *Director*

December 10, 1930.

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Introduction

Walter S. Monroe, Professor of Education,
University of Illinois

A survey of current educational practice would reveal wide variations. At one extreme, we would find some schools very similar to the typical school of a generation or more ago. In these schools, the elementary curriculum includes little more than the traditional three R's plus language or grammar, geography, and United States history. The discipline would be characterized as strict and militaristic in type. The assignments are exceedingly formal, usually merely requests to "take" certain pages or exercises in the textbook. The pupil's study within a subject is confined almost wholly to a single text, and the recitations are of the lesson-hearing type. The achievements of the pupils consist largely of certain skills and the memorization of symbols of knowledge.

At the other extreme, there are many schools of the modern type, and perhaps a few that should be designated as "ultra-modern." In these modern schools, the children learn to read, to write, and to do many of the other things taught under the traditional curriculum, but the daily program may not include any specific mention of reading, writing, arithmetic, grammar, and the like. The discipline is highly socialized. Instead of formal assignments, there are conference periods in which the pupils and teacher together plan what they are to do, and the learning activities are largely attempts of pupils to realize their own purposes. Many books and other sources of information are used. Instead of being a task master, the teacher functions as a leader and, to some extent, as a member of a group which is organized to achieve an end in which all are interested.

Most of our schools would be placed between these extremes, but this middle group would differ in many respects. There is not time to describe the complete picture, but it is apparent that great variation exists in our educational practice. These variations are the source of progress. It is only by experimentation, by trying out new procedures, that we are able to evolve better methods of educating children. It should be noted, however, that some of the things that we are doing, or attempting to do, doubtless are not in the direction of progress. Some of the procedures that we are beginning to discard are perhaps more effective than those that are being introduced in their place. The final decision concerning the innovations that are in the direction of progress must be left to future generations of students of education. However, if we look backward and note certain aspects of our educational theory and practice about 1900, we shall have a helpful background for evaluating present trends.

Throughout the nineteenth century the public school grew in importance as an institution of our social organization. By 1900 compulsory attendance had become rather generally accepted in principle, and school enrollments were beginning to increase rapidly. It should be noted, however, that education, even on the elementary-school level, was far from being universalized, and many persons believed that high schools should not be maintained for all the children of all the people. The Committee of Ten reporting in 1893 wrote of the secondary school as designed for "that small proportion of all the children in the country— a proportion small in number but very important to the welfare of the nation— who show themselves able to profit by an education prolonged to the eighteenth year and whose parents are able to support them while they remain so long at school." This position was not accepted by all, especially in the North Central section, but it probably represents the prevailing belief just prior to 1900.

Although the report of the Committee of Ten dealt with secondary education, it reflects the concepts of learning and teaching prevailing just prior to 1900. Both the general report and the reports of the various subject committees are written in terms of faculty psychology and the doctrine of formal discipline. According to faculty psychology, the principal outcomes of learning are certain trained faculties of the mind, such as memory, discrimination, and reasoning. The doctrine of formal discipline specified that these faculties were to be trained by doing highly formal learning exercises. Consequently, the educative value of a learning exercise was considered to depend largely upon its difficulty, and those in the field of mental arithmetic, plane geometry, and Latin were considered to stand high on the scale of educative value. A survey of the educational writings of this period reveals that learning was generally considered to be a disciplinary process and that the principal functions of the teacher were to keep order, to make assignments, and to hear lessons.

The attack upon the formal discipline concept of learning began to be prominent soon after 1890, the date of the publication of *Principles of Psychology* by William James. One of the most influential events was an address by B. A. Hinsdale in 1894 before the National Education Association on the topic "The Dogma of Formal Discipline." Although many educators continued to think in terms of the doctrine of formal discipline, Hinsdale's address may be taken as the turning point of the attack on the belief in the transfer of training. By 1900 a considerable number of the leading educational thinkers had definitely rejected both faculty psychology and the doctrine of formal discipline. Our present concept of learning is the product of the past twenty-five or thirty years.

The chronology of the development of other aspects of our educational thinking and practice is indicated by the dates of certain events. Although the activities of Colonel Francis Parker began somewhat earlier, they may be mentioned in this connection. His work at Quincy, Massachusetts, began to attract attention shortly after 1875, and it is reported that over 30,000 visitors came to observe his work in the Quincy schools during the three-year period from 1878 to 1880. Later he became principal of the Cook County Normal School at Englewood, Illinois, and still later, the head of the Chicago Institute for Educational Experimentation, which in 1901 was incorporated as the School of Education of the University of Chicago.

I have already mentioned the publication of William James' *Principles of Psychology* in 1890. His *Talks to Teachers* appeared in 1899. Another psychologist, G. Stanley Hall, gave a strong impetus to what is commonly referred to as the "child-study movement." The *Pedagogical Seminary*, of which he was editor, made its first appearance in 1891. His monumental work, *Adolescence*, was published in 1907. John Dewey, who has influenced our educational theory and practice more profoundly than any other man during the past half century, began his experimental school at the University of Chicago in 1896. *The School and Society*, in which he presented many of his educational theories, appeared in 1900.

The Herbartian movement, which focused our attention upon methods of teaching and which gave us the instructional formula known as the five formal steps, was introduced into this country just prior to 1890 by the return of a small group of men who had studied under Rein in Germany. A national Herbart society was organized in 1892, and by 1900 the movement was beginning to influence educational practice, especially the method of classroom instruction in the elementary school. Interest in the movement was increased very materially by the publication of certain books: *General Methods* by

Charles McMurray in 1892, *The Method of Recitation* by Charles McMurray and Frank McMurray in 1897, and *The Essentials of Method* by Charles de Garmo in 1899.

A significant addition to this picture of educational theory and practice thirty to forty years ago is furnished by the reception given to a report on the teaching of spelling presented by J. M. Rice at the meeting of the Department of Superintendence in 1897. The crowded condition of our elementary curriculum had provoked discussion in regard to the amount of time that should be allotted to the several subjects. Spelling, which had come into our curriculum with the publication of Webster's spelling book near the close of the eighteenth century, was considered an important subject. In many schools it was given a very generous amount of time. Several new subjects, however, were demanding recognition, and their advocates insisted that the amount of time devoted to spelling should be reduced. Rice, who at that time was editor of the *Forum,* conceived the idea of giving a spelling test in the schools of a number of cities where the time devoted to the subject varied and of thus obtaining objective evidence of the relative merits of different time allotments. When he presented the report of his study at the meeting of the Department of Superintendence in 1897, the audience was practically unanimous in ridiculing his attempt to study the question in a way that today we would designate as "scientific."

In addition to revealing the lack of a scientific attitude toward educational questions, this event demonstrated the prevailing belief that the more important results of teaching could not be measured by administering a formal test. Although written examinations were generally required, and the resulting grades were considered valid measures of achievement in determining promotion and in awarding school honors, the educators of the country denied the possibility of measuring the results of teaching, when an explicit proposal was made that this be done. Thorndike's text on mental and social measurement was not published until 1904, and the work of Courtis and others who popularized educational tests did not begin until several years later. The first of the Starch-Elliott investigations, which revealed that teachers differ widely in the marks they assign to the same examination paper, was not made until 1912. The first edition of the Binet test for measuring general intelligence was published in France in 1905. The first widely known American revision of this test, commonly referred to as the Stanford Revision, was not made until 1916.

The reception given to Rice's report of his investigation on the teaching of spelling and the dates of the other events just noted make clear that in 1900 we did not believe in scientific inquiry in the field of education, that we did not believe in educational measurements, and that we were accustomed to reaching conclusions about education by speculation and to accepting pronouncements made by those respected as authorities.

The various events that I have referred to briefly, together with others which would be included in a complete history of education during the period just before and after 1900, stimulated thinking about education and led to the widespread experimentation in educational practice which has characterized American schools since that time. It is, of course, difficult to evaluate current changes. They may be in a direction of progress, or they may mark a regression in our social development. Some of the innovations introduced have not been wisely planned, and a considerable number may be designated as mere fads sponsored by a single teacher or superintendent or at most by a small group. I believe, however, that we are justified in accepting the present trend as progressive, and that although we should be reasonably critical and should not follow in sheep-like fashion those who would lead us, we cannot afford to ignore the proposals that are being brought to our attention by speakers at educational meetings, by those writing in our educational periodicals, and by the authors of the large number of books dealing with the many aspects of education. The need for becoming acquainted with what is going on and with the thinking of educational leaders is greater than ever before. Consequently, the College of Education of the University of Illinois invites your attention to the program of the afternoon which has been built around the central topic, "Progressive Trends in American Education."

Psychology and Recent Movements in Education

E. H. CAMERON, Professor of Educational Psychology,
University of Illinois

It is not quite clear what is meant by "progressive education" or precisely what are the characteristics and procedures that are to be found in progressive schools. Many able thinkers have attempted in vain to find some adequate means of defining progress—some measuring stick that may be applied to determine whether the purposes of the present and their attendant activities are superior to, and in advance of, those of the past. Whether it is possible to define progress, I shall not attempt to say, but it is certain that progress cannot be determined unless standards of value can be set up, and it is no less certain that in the present state of our knowledge there is no large amount of agreement on what constitute the real values of contemporaneous civilization, and much less concerning the essential values of education.

For these reasons it would be a futile task to attempt to show precisely at what points, and in what manner, psychology should affect practices and theories of education. Practically the same sort of raw materials goes into the construction of all of the many kinds of automobiles that are built in this country, but before any kind of automobile can be manufactured successfully, it is necessary to know the properties of the raw materials that enter into its construction. Whether from these materials there is built a Ford coupé or a Cadillac sedan depends on the purposes of the manufacturer. The tools and machinery used and the methods of fashioning the raw materials will in turn depend on the type of car to be made. To be sure, the properties of the raw material will modify to some extent the purposes of the manufacturer, though to a very great extent materials may be rejected, and others selected that will meet the requirements more adequately.

Those who carry forward the work of education have little opportunity, at least so far as the public schools are concerned, for selecting the materials to be shaped by the educative process. It is the function of psychology to describe the various properties of these materials—the way they behave under various possible surroundings and impressions and ways of dealing with them, but the purposes to be maintained and the goals to be reached in relation to these living materials are not clearly revealed by such descriptions. It is not possible to determine what children ought to *become* by a study of what they *are*.

It would be a mistake, however, to suppose that psychological study has no relation to the question of aims and purposes in connection with education. Just as with a given kind of material, it is necessary to limit one's purposes to the construction of objects to which the properties of the objects are adapted, so, in the case of the young, the final goal or goals of their education must be such as can be realized in view of the fact that they are the kinds of beings they are. Thus in the great enterprise of education we must continually return to a consideration of the nature of the child and the world in which he lives to make sure that our purposes are possible of realization.

Perhaps the most outstanding features of the general type of schools that have some claim to the epithet "new" or "progressive" are embodied in the words "activity" and "freedom." As Rugg says in his book describing and evaluating these schools: "Free the legs, the arms and the larynx and you free the mind."

The newer type of schools is characterized by the fact that the pupils are much more patently moving their arms and legs and making more audible sounds with their larynxes than they do in the old-fashioned school. The proponents of the new schools say they base their views on the "new" psychology, one of which seems to be born every few years. They say that modern psychology teaches that the very purpose of the mind is to govern and control action. An older psychology thought of the mind as something, to be sure, connected in some way with a body, but in nature so different that it must be thought of as apart from the body and treated and developed as an end in itself. The child's body was for the teacher a necessary evil that got in the way and hindered the true purpose of education, which concerned the mind alone. It cannot be doubted that this view of mind has been of weight in connection with traditional education. The apostle Paul thought of his body as a drag on the aspiring soul and writes, "I keep my body under." When I began teaching, the first question asked of a teacher looking for a position was "Can you keep order?" Keeping order consisted largely in the task of keeping the pupils' "bodies down." We have departed a long way from this tradition even in schools that do not describe themselves as "progressive" or "activity" schools. But it is a far cry from the doctrine that mind and body are correlative functions of a single basic unity and from the now generally accepted psychological view that the mind's proper and unique function is to guide and direct activity, to the educational corollary that the advocates of these newer schools have deduced from the doctrine. Instead of being called activity schools, these schools should be called *movement* schools. Now there is a vast difference between movement and activity—or at least between moving limbs and active muscles. William James in expounding the functional point of view of mind in his *Talks to Teachers* over thirty years ago—a point of view which as I have said is now generally accepted—was very careful to make this distinction, and I doubt not for the very reason that he feared some exaggeration as a consequence of his statements. Listen to what he writes in concluding his argument that all consciousness leads to action.

"The reaction," he says, "may often be a negative reaction. Not to speak, not to move, is one of the most important of our duties in certain practical emergencies. 'Thou shalt refrain, renounce, abstain'! This often requires a great effort of will power, and physiologically considered is just as positive a nerve function as is motor discharge."

The fact is, of course, that just because mind and body together in their intimate relationship constitute an organism whose function it is to act, it follows that this organism is always active, though not necessarily moving about or even kicking with feet and legs or moving hands and arms. The fact is, of course, that there are no schools in which the pupils are not all active. Death is the only condition in which pupils are not active.

I would not have labored so long to bring about a conclusion that is so very obvious if the leaders in the so-called activity-school movement did not base their views on some such logical formula as this:

> Psychology teaches that the mind functions through bodily activity; ∴ in school, children should be moving about and doing things with their hands.

Having cleared the ground in this way we are ready to perceive more readily the real problem concerning activity in the schoolroom. The problem that we have to face is that of determining the really desirable kind of activity to be pursued. Shall the schoolroom be a place where the activity engaged in consists in movements of legs and arms and oral language, or is it more desirable that there should be activity unaccompanied by outward movement, in the form of silent language rather than of speech? Now the answer to these questions cannot be obtained from the psychology involved, as we have seen. Where shall we turn for an answer? So far as I can see, we must look to the results. One may have the opinion that the best consequences in life are those that occur in relation to nonmoving activity, and that, therefore, school is the place where children shall learn to perform this kind of activity. It is no proper answer to this point to say, as some one is bound to say, that it is not natural for little children to be active in this way, and that it is natural for them to be active as *in* play. It may be taken for granted that the reason for the existence of the school is that we desire in children some other outcome than that which develops naturally. The real point is whether the method of repression of muscular movement is the best for bringing about that intellectual and moral development which we conceive to be the goal of the educative process.

I am always suspicious of any argument used to advocate a method of school procedure on the ground that it is natural for the child to act thus and so. In my opinion more logical crimes are committed on the ground of the natural than on almost any other ground. If one defines nature as that which existed before man's corrupting influence was laid upon it, and if one thinks of the natural man as the primitive man who dwells in such an environment, it seems clear that a greater or less amount of time *is* spent in moving about. He has to hustle for his food. The amount of activity engaged in, however, is directly proportional to his hunger, and to the extent that he is satisfied, he remains relatively quiescent. When darkness comes on, he perforce ceases his roving and becomes relatively inactive. It is under these circumstances that his activity is thrown in on himself, so to speak. He begins to have ideas, memories of what happened in the chase, imaginations of what might have happened. At first these ideas may have been used merely to fill in the idle moments. They prompted no activity resulting in actual movement. Soon, however, primitive man began to respond to these ideas by making representations on the walls of caves, and thus art began and has continued, a sort of activity that is in no sense related to the direct procuring of food. By an extension of this same process—ideas became a means of indirect action with reference to the world that in time resulted in a making over of the environment—in a word, in those changes which we describe as civilization. Ideas represent delay in overt activity, and during these periods of delay we are preparing for overt action in a much more adequate way than when action is immediate and impulsive.

It would appear then that there is considerable justification for the relative lack in overt activity in the traditional schoolroom. Indeed, it may be held that the school exists, at least in part, for the purpose of training the young in that higher form of activity in which manifest outward movement is restrained and the process of deliberation, engaged in.

On the other hand, there seems little doubt that the traditional school has too often made this restraint of outward movement an end in itself or has used it for purposes of mere discipline or order with the result that the atmosphere of the schoolroom is too artificial to be truly educative. It is incontrovertible that the experiences of the schoolroom should be as meaningful as possible to the pupil, and meanings are derived primarily from contact with an active manipulation and use of things. Wherever experiences outside of school have been inadequate to provide these meanings which are indispensable for the higher thought processes, the school itself should provide them. At all stages of education, therefore, means must be provided for this kind of direct contact with the world of things in preparation for the development of adequate and correct ideas. It is safe to say that the kindergarten and the earlier grades of our more progressive school systems have gone a long way in the direction of making schoolroom experiences meaningful to the young and in releasing them from artificiality and formality. Many schools have still far to go before this evil spirit of education is banished.

It had been my purpose in preparing this paper to attempt an analysis also of the idea of freedom which plays so prominent a role in so-called progressive education. If the limitations of time set for the paper did not prevent, I believe it could be successfully shown that many of those who are advocating freedom for the child are deluding themselves. In one sense of the word the act of establishing the school as an institution becomes a limitation upon the child's freedom. But in this sense we are all limited in our freedom by the fact that there are persons and things around us that in part determine our conduct. The question that confronts us, therefore, in relation to the young is not how to give them freedom, but how to arrange their environment so that the inevitable influence from persons and things that surround them may lead to the most desirable development of personality. Much would need to be said on this point in order to clarify it properly, but it seems to me safe to say that progressive schools may easily become too progressive by virtue of an idea that is nothing more than a slogan.

Progress in education seems destined to depend on the efforts of educational reformers who receive some enlightening suggestion, and forthwith proceed to push it to such an extreme that it is no longer acceptable. If we are to succeed, the newer views must be reconciled to what is true and tried in the old; otherwise, the values of both the new and the old will be lost in chaos.

In closing I can do no better than to quote a well-known American thinker who appraises the type of school that is under consideration as follows:

"In criticizing the progressive schools, it is difficult to make sweeping generalizations. But some of these schools indulge pupils in unrestrained freedom of action and speech, of manners and lack of manners. Schools farthest to the left (and there are many parents who share this fallacy) carry the thing they call freedom nearly to the point of anarchy. It is the absence of intellectual control through significant subject-matter, which stimulates the deplorable egotism, cockiness, impertinence, and disregard for the rights of others apparently considered by some persons to be the inevitable accompaniment, if not the essence, of freedom."

Those who have really studied his theories will not be surprised to learn that these are the words of John Dewey, who is generally regarded as the high priest of progressivism in education.

Progressive Trends in the External Organization and in the Curriculum Content of Our Schools

J. A. Clement, Professor of Education,
University of Illinois

Not all current tendencies in our schools necessarily represent progressive trends. It is very essential, therefore, that schoolmen possess as sound a philosophy of education as possible in order that substantial progress may be made in the external organization and in the determination of the nature of the content of the subject-matter to be offered in elementary and secondary schools. To be conversant with, and cognizant of, a well-thought-out body of educational theory is essential in order to avoid an emphasis upon extremes, or in order to avoid superficial practices. Obviously, evaluation is necessary in order to determine what trends are most desirable and most defensible. Evaluation of educational theory and practice relative to external organization and to curricular aspects has been too much neglected as an accompaniment of the rapid transitions and modifications that have occurred during the last three or four decades. We have been too prone to proceed on the plane of trial and error and too willing to accept, somewhat graciously at times, our educational penalties whenever they have been discovered and announced.

For example, in the past it has been quite customary merely to describe, and sometimes to analyze, the various so-called sections or divisions or units of our elementary and secondary schools and to describe in detail the nature of different curricular offerings. This practice has some relative importance, but it represents only a portion of our stupendous task. To fail to make any distinction between the province of the science and the philosophy of the external organization of our schools, as well as to fail to discriminate between the science and the philosophy of curricular offerings, is simply to inveigle us into chaos in our thinking and into confusion in our practice. The scientific treatment of external organization and of content offered involves a detailed description and analysis of numerous factors. This should be recognized as a part of our challenging problem. The philosophical consideration of the external organization and of the content of subject-matter also involves the appraisal and valuation of many factors,—i.e., intelligent judgments pertaining to their worth. This, too, represents an important supplementary part of the challenging problem that we now face, which part, to reiterate, has been the most neglected aspect in our rapidly changing educational panorama of events.

The cumulative literature of the last few decades or more relative to the problems of external organization and of curricular content has been predominantly descriptive and analytical in nature, rather than synthetical and constructively critical. This procedure of description may have represented a natural beginning, but it should not represent the final stage. It has, for example, been customary to give an inordinate amount of time and space to a mere description of the form and type of the external organization of the traditional elementary and secondary school or, more recently, to a mere description of the reorganized forms, such as the six-year elementary school, the junior and senior high school, and the junior college. As a consequence the various external forms of both the traditional and the reorganized plans have been too highly worshipped as ends in themselves, rather than regarded as convenient means for attaining certain desirable goals. Moreover, this condition has led frequently to an abrupt demarcation between external and internal organization.

Some evidence of the tendency to over-worship external organization, at the expense of internal organization, has been manifested in the vigorous and multifarious claims that have been used in the defense, for example, of the 8-4 plan, or of the 8-4-2, the 6-2-4, or the 6-3-3 plans, and of other modified forms, or most recently of all, in defense of the 6-4-4 plan. Whenever these respective forms become mere fetishes unduly worshipped by schoolmen, then the real relationship that should obtain between external and the internal organization is almost wholly obliterated. The necessity of recognizing divisions of the school system, administratively considered, should not blind one to the necessity of seeing the importance of rationalized internal organization. Both scientific description and analysis, and philosophical interpretation and evaluation are essential in the present trends in the external organization and in the formulation of content.

The length of elementary education and of secondary education is worthy of some consideration, but this element should not receive a disproportionate amount of emphasis to the exclusion of other important elements. Why not throw the whole issue into a somewhat new setting and inquire as to what are the demands, needs, interests, capacities, and achievements of all pupils at certain levels or stages, irrespective of the exact type of external organization in which such pupils may chance to be found? Why pretend to make too sacred any one form of external organization in contrast to all others? Why not take into account both the similar and dissimilar problems found to exist which affect the progress of pupils when they have reached what corresponds, for example, to the sixth, the ninth, the twelfth, or the fourteenth grade levels, irrespective of whether such problems appear in the 8-4, or in the 6-3-3, or in the 6-4-4 systems of organization?

The mere length in years of the different subdivisions of the complete educational ladder is only one of many factors that should be considered. It may be necessary to grant that the exigencies of administration demand that these divisions be recognized, and that these divisions are warrantable in part because not all pupils will travel the full length of the ladder. This granted, however, is it not a part of educational wisdom to insist that the mere factor of the length of years of any one division or other is quite an insufficient basis on which to judge the real worth of work accomplished in the elementary- and secondary-school levels?

Numerous writers and speakers have been fond of reiterating the statement that the original length of time that the elementary and secondary school required in this country was not consciously and carefully "designed." The practical outcome of this early traditional scheme was, of course, the duplication and overlapping of the elementary school and the secondary school, and the overlapping of the secondary school and college; it is an interesting observation that this same condition has carried on over into the newer forms of organization, especially in the instance of the junior and senior college. The reorganized external forms have grown up during the first quarter of the twentieth century, and the various sections of the educational ladder in different localities vary in lengths to the extent of a dozen or more in number. In the northern, in the north-central, and in the western states the reorganized elementary school is found to be predominantly six years in length, justified, on the whole, on the ground that it is possible to master the fundamentals of elementary education during this interval of time. The next section of the educational ladder above the reorganized elementary school has great variations of length, varying from one to two, three, and even four years, depending somewhat upon the regional area represented. During the last twenty-five years, and especially during the last few years, when the 6-4-4 plan has been defended by a limited number of outstanding proponents, certain problems of organization have been revived which were discussed as early as the nineties by Charles W. Eliot, by the Committee of Ten, and by successive committees for the two decades following.

Such questions of reorganization as the following reflect present trends:

1. Should the length of elementary education be six, seven, or eight years?
2. Should the division or unit corresponding to what is characterized as secondary education extend upward or downward or both in comparison with the four-year high school?
3. Should the whole public educational ladder be longer or shorter than at present? Should it be eleven, or twelve, or fourteen years in length?
4. Should any divisions at all occur within the whole system? If so, should they be fewer in number than now exist in the reorganized forms?
5. Does the number of divisions in the complete educational ladder necessarily imply an equal or corresponding number of breaks or gaps in pupils' training?
6. Should "general training or education" constitute predominantly the type of work offered in both the elementary- and secondary-school divisions?

No final answers appear as yet to be available relative to these apparently simple questions. The possession of a genuine philosophy of the external organization of our schools that will take into account other factors than the mere length of the various divisions constituting the complete ladder would seem to be very essential in any attempt by any one to furnish satisfactory solutions to the problems raised above. For example, it would be possible to begin with the tenet that it is important to unify, coordinate, or articulate educational work at all levels or stages of the pupils' achievement and progress from their orientation into the elementary school on, throughout whatever subdivisions may be made for the convenience of administering different systems. One, of course, may pertinently raise the query whether it might not be possible for different school systems to achieve equally well the same purposes and results through different types of external organization adapted to respective communities, providing certain fundamentals relative to internal organization were agreed upon by respective administrators.

A second tenet with which one might begin is that the predominant emphasis of both the elementary and the secondary divisions of education should be placed upon general training and education for the pupil group as a whole, some allowance being made for variation, differentiation, and specialization in the instance of a certain proportion of pupils in the latter part of the secondary-school division. The previous discussion prepares the way for several summary statements relative to the establishment of a progressive educational theory and doctrine as applied to the external organization of our schools. The first of these is that the external plan of organization, irrespective of its peculiar form, should represent at all points, levels, or divisions in the elementary-secondary school ladder a well articulated and unified system of concepts and practices, consciously planned by capable persons and participated in by all school officers concerned. The report of the commission now working on the problem of articulation will be received with considerable interest in 1931 when it has come to some conclusion with reference to this important trend in educational doctrine and practice. A second summary statement of large significance is that the chief concern of both elementary and secondary education consists of giving a "general training" and background to all pupils in attendance in these institutions, and that such training should predominate for most pupils up to the end of the fourteenth grade, or to the end of the junior-college division. One defense which can be made for this is that in this way interests and ideals of pupils are integrated and sociologically characterized, and that a solidarity of mind is induced in pupils.

Only a brief consideration can here be given to the much abused and widely discussed problem of the content of the curriculum. Apparently both the competent and the incompetent appear to be eager, willing, and prepared to defend or attack this problem of the changing nature of subject-matter. Even on the matter as to who are the competent and the incompetent persons to pass judgment on curricular aspects, there appears to be difference of opinion. Whatever was said earlier in this discussion with reference to mere description and analysis, and with reference to the interpretation and evaluation of external organization is here, likewise, applicable to the curriculum. In short, description of the content of our cumulative curriculum, even years ago spoken of with alarm as the "overloaded curriculum," when unaccompanied by evaluation will at present and in the future lead us nowhere.

Furthermore, in the previous discussion it has been assumed that external organization should not be regarded as an end in itself but as a justifiable means for the realization of avowed worthy ends or purposes. Likewise, at this point of the discussion, it is assumed that the content of the curriculum should neither be offered as a mere end in itself nor merely in the name of important cumulative knowledge, though this aspect is not, of course, to be wholly ignored in the new set-up of the expanding purposes of elementary and secondary education. On the whole, the tendency now is to assume that most of the subject-matter offered for purposes of general training to all pupils shall be made to contribute to the realization of a wider range of objectives than was true at the time of the respective establishment of the elementary and secondary schools in America. Many factors in our civilization have contributed obviously to this broadening of the objectives and of the aims of the schools. They have evolved inevitably out of our changing environmental conditions. These elements are represented in new modes of travel and communication, in the changing social and economic theories and practices, in the present industrial conditions, and in the increasing discoveries and astounding contributions of science. The fiber and fabric of our American civilization now represent the combined product of all of these dynamic forces. Curricular content cannot remain wholly static and unchanged in the midst of these changing conditions any more than can the delimited aims and purposes of earlier education remain unsupplemented. The total picture is different from that of a century or more ago when the traditional elementary and secondary school attempted chiefly to prepare for the next division of formal education. Because of the numerous impacts made upon modern society, it is impossible even in the rural sections of our country to find any longer the simplicity of environment of the New England days when the Latin grammar schools came into existence. Our urban centers are infinitely more complex than were the conditions, for example, surrounding Boston, Lowell, Salem, or Cambridge in Massachusetts at the time when a number of public high schools began to operate.

One of the dominant purposes of the elementary school was to prepare for secondary education, though it should be remembered that at one time our elementary school, like that of Europe, was built upon a separate foundation from that of the secondary school. The present trend is to include preparation for the next division above, but not merely in a narrow academic manner. One of the dual purposes of the earlier secondary school was preparation for higher education. This purpose is not lost sight of in the present trend, but it, too, has broadened so as to include more than mere academic preparation and pursuit of correspondingly literary subjects. From 1890 to 1930 educational purposes have gradually multiplied for the elementary and secondary school. These in turn have been used as criteria for the selection of subject-matter to be taught. Koos says, "Curricular expansion may be considered almost, if not fully, as significant as the numerical and proportionate increase in schools and enrollment. . . . Up to the opening of the twentieth century most of the additions were of an academic sort. The only frequent expansion along nonacademic lines was in commercial subjects, although training in the practical, vocational, and fine arts was sometimes made available. Since 1900 there has been a notable increase in these, as well as further modifications in the academic fields."

One of the multiplied aims or purposes of education which has perhaps received the widest recognition is that of meeting the "social needs of pupils." This is now used as one of the dominant criteria for the selection of subject-matter in such subject groups as English, foreign language, mathematics, elementary science, and especially history, civics, and other social studies. This issue of the changed nature of subject-matter earlier took the form of elimination and modification of certain subjects or portions of subjects, and often it has been characterized in the junior-high-school movement as the "enrichment of subject-matter." One outcome or result of this tendency to adapt subject-matter to the so-called criterion of "social needs of pupils" has been to stress the functional organization and presentation of materials on the elementary-school level and in the junior-high-school division, and to reserve the more formal, technical, and logical organization and presentation of them for the later division of the secondary school. The observation should be made here in the light of frequent adverse criticisms that this tendency to socialize materials of instruction and adapt them to the respective capacities of pupils does not necessarily imply that they have been made so easy that pupils need not put forth any concentrated effort in order to master and interpret their full meaning.

The nature of the content of the curriculum has changed in at least two ways. In the first place, as has been pointed out, the subject-matter has been made to contribute to a larger number of life interests, or of broadened aims of education. In the second place, many new subjects and subdivisions of subjects have been added to the schools. Even as early as the Civil War period there began to be some modification of content in the high schools, as Stout's study of twenty high schools indicates, the academy having been a large influence as a model for curricular content of the high schools. In 1914 Holmes' study of fifty American cities indicated that over 40 percent of the time in the elementary schools was given to the language arts, including reading, spelling, and penmanship, and that if arithmetic were added to the list, the language arts and arithmetic combined consumed over 50 per cent of the total time. Elementary science, geography, and social studies combined represented only about 15 per cent of the total time given to different subjects. Holmes' general conclusion was that the elementary schools of the fifty cities studied were highly literary and academic in nature. Today if a survey were made of the schools that claim to have reorganized their systems, the proportion of time given to elementary science and to practical and fine arts, and especially to the social studies would be very much increased in comparison with that of the time when Holmes' study was made.

In the study made of the senior high schools of fifteen American cities in 1924, it was reported that the nature of the content was primarily literary and academic in nature, but that as many as sixty-four subjects had been added to the curriculum during an interval of five years. Concrete evidence is at hand from a number of sources to show that the range of subjects in the secondary school has greatly increased to the extent that it includes fine and practical arts, as well as curricularization of extra-curricular activities. Studies made by the National Association of Secondary School Principals in 1925 and reported in its *Ninth Yearbook* showed not only the increased proportion of social studies in the curriculum as a whole, but a new distribution of the divisional aspects of history and other social studies, as was true to some extent in the other subject groups. The junior-high-school movement has been defended on the grounds that the content of the curriculum includes the whole range of pupils' interests. Though the senior-high-school division has been slow and conservative in adding to, and in modifying, the curriculum during most of the nineteenth century, nevertheless the first quarter of the twentieth century has brought forth numerous changes. The tendency has persisted during the last thirty or forty years not only to increase the total number of subjects but to multiply the divisional aspects of subjects in both the elementary and secondary school. Along with this has been the tendency to offer a large body of common materials of instruction embodied in the form of so-called core-curriculums or constants-with-variables. This tendency to offer a large body of constants along with some variables is in harmony with the contention that general training of pupils should occupy a large place in both the elementary- and secondary-school division, in which the proportionate number of class hours somewhat is decreased toward the end, but not wholly discontinued.

A part of the business of the schools is to mirror the past and present elements of civilization that have appeared to include the largest values. But a part of their business is also to incorporate into the curriculum those elements that will assist in creating new desires, ideals, and conditions. The parts of the traditional curriculum that still possess large values should be preserved as constants, and those parts that do not function under our changing civilization should either be modified or wholly deleted.

The mere multiplication of the objectives or aims of education from one or two to a half dozen or more, or the mere accretion of a score or more of subjects and their numerous subdivisional aspects unaccompanied by constant efforts to evaluate the same is likely to block the possibilities for real progress in formulation and organization of the content of the curriculum in the modern school.

The curricularization of the schools of our day and generation will need to take account of a different set of conditions and facts from those found in the days in which *Evangeline* and *The Courtship of Miles Standish* were written. This implies that the school must do something more than merely mirror the past and present. The school must also attempt through some phases of the content of the curriculum to create new ideals, desires, and conditions.

"The machine, science, capitalism, standardization, the city, mass education, the historical attitude, democracy, nationalism, these are the forces that are together making the new world," says Randall in his *Changing Civilization*. He continues as follows: "Our civilization is the heir of many ages and is scarred by the struggles of the past, just because it has been woven from a host of different elements. . . . Each generation of persons is entitled to the 'heritage' of what is thought to be fundamental to the previous generations of individuals, including the full sweep or range of human experience rather than merely some small fraction of the same."

Progressive Trends in Public School Administration

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You have read, no doubt, many of the modern criticisms of education, including both the recent Counts and the Briggs Inglis lectures, and you have sought with the rest of us for some modicum of evidence of something that is right with our modern education. You have carefully scrutinized the *Seventh Yearbook of the Department of Superintendence* and have seen in that preliminary report of the Commission on Articulation a subtle attack on our one-time absolute faith in organization as a panacea for our common educational ills. You have followed the versatile Dewey in his insistence that we view all problems of education today, as we should have done from the time he first began his cry in the wilderness more than thirty years ago, as wholesome personal integration with a view of overcoming all those subtle inroads this industrial age makes upon our private life.

To me it seems these criticisms and many others, to which we shall have no time to allude, mark a new era in public school administration. In the past we have pinned our faith to techniques, to procedures, to types of organization. Today we see in these externals but the evidence of an underlying policy; and in the policy, but the evidence of an underlying philosophy of education; and in the philosophy of education, but the evidence of keen insight and critical judgment. Matters educational seem to be in a ferment and turmoil because we no longer rely on prevailing opinions, not even on the judgment of the so-called specialist or the frontiersman in our educational thinking.

The most significant trend, therefore, in modern public school administration is best characterized as a change in the attitude and the temper of mind with which the public school administrator as an independent and self reliant professional practitioner attacks the many complex problems certain to confront him in his active career. If we wish to go beyond the accepted and the formal, it becomes extremely difficult to discuss the duties of the public school administrator today. The duties of the public school administrator lie very largely in his recognition of the social function of the office and not in some foreordained or preconceived obligations to an established order. We are not concerned today in the way in which a single public school superintendent, or for that matter any number of superintendents, spend their time. It is far more important to be concerned about the public school administrator's breadth of information, the range of his vision, the clarity of his thinking, the firmness of his convictions, and the high quality of his courage than with any arbitrary list of the things he is doing or is "supposed to be doing." Frankly, even the wisest among us cannot presume to say what the public school administrator is supposed to be doing. Nothing even in the best of our modern procedures is anywhere nearly adequate as an illustration of his more comprehensive social obligations. The public school administrator of today who most fully recognizes his duty to the social order will find few precedents indeed to fall back upon.

The actual duties of the public school administrator depend, then, on his professional integrity and on the sincerity of his purpose in grasping situations, in attacking problems, in seeing relations, in passing keen and critical judgment. The executive competency of the public school administrator will depend on this fine quality of initiative, on this abundant enthusiasm, and on the indefatigable effort with which he makes attempts at solution, appraisal, and readjustment in the social realignment.

Just as the training of the physician lies not in any body of accumulated knowledges or skills but rather in an acquired potentiality and versatility of mind in using these knowledges and skills in the attack on the many problems that confront him, so, too, the training of the public school administrator cannot lie in his fixed associations, his specific skills, and his acquired knowledges, but rather in a versatile potentiality in the sane use of them. The professional horizon of the public school administrator has changed materially in the last decade. This new conception of his function necessitates the acquisition of subtle qualities of (1) intelligent skepticism, (2) intelligent optimism, and (3) intelligent courage.

By intelligent skepticism we mean that temper of mind that does not recognize a conclusion as binding or final merely because of the eminence of the authority making the pronouncement. Intelligent skepticism insists on proving all over again what has been shown to be true or disproving it, if it happens not to be true after all. It was intelligent skepticism that led the German scientists to accept Professor Hopkins' announcement of the discovery of Illinium with no ill-disguised doubt until the outcome of their laboratory experimentation actually verified his findings. There is only too often all too much fatalism in the verdict of the specialist. We consult the specialist to find out that a thing cannot be done. The practical practitioner, however, free from such preconceived prejudice must have the intelligent skepticism to view a situation with open-minded candor.

Just as essential, though, as this intelligent skepticism is an equally intelligent optimism. To find fault merely for the sake of finding fault, without any adequate appraisal with a view of readjustment, is just as fatuous and futile in education as in any other field of endeavor. The faith of the American people in the efficacy of education is so unmistakably clear that the public school administrator is confronted at every hand by this need for larger outlooks. He must have, then, both an intelligent skepticism and an equally intelligent optimism.

But far more essential than either or, for that matter, both this intelligent skepticism and this intelligent optimism is an intelligent courage. Only as the specialized skills and knowledges at his disposal can be skilfully, rationally, ethically, and courageously applied to the practical affairs at hand can the public school administrator face these larger obligations which a rapidly changing social order has superimposed. Only as he has the firm courage of his convictions without the conceit of them can he be relied upon to do the essentially professional duties devolving upon him in getting order out of the chaos of this welter of educational beliefs. Only so can he see clearly, plan wisely, and execute efficiently.

In this finer type of professional equipment characterized by intelligent skepticism, intelligent optimism, and intelligent courage we have the most marked progressive trend in modern public school administration, giving a fine promise of doing away with the makeshift and short-sighted opportunism that only too often characterized our attitudes in the past. This professional integrity manifests itself in some of the most decided departures from the formal and traditional. We are just beginning to get away from our slavish reliance on prescribed dicta. We are just beginning to face issues with indomitable courage.

The two most wholesome outcomes of this newer trend seem to me to be: (1) the unmistakable line of demarcation between the layman's conceptions in education and the conceptions of the professional educational administrative practitioner; and (2) the tardy and reluctant but nevertheless respectful recognition that is being accorded the professional practitioner in public school administration by the doctor, the lawyer, the dentist, the engineer.

As evidences of this finer intellectual integrity and higher type of intellectual courage may I point, in conclusion, to just a few unmistakable movements. I have already referred to the fact that the Commission on Articulation which is to report to the National Education Association Department of Superintendence in 1931 has led the way in this more comprehensive view of the problem of public school organization. Both Chairman Weet and Dewey are in close accord in the conviction that the most essential articulation is that "inner articulation" or rather integration that assures to each pupil a wholesome integral personality.

In the second place, Fred Engelhardt recently started something, too, it seems to me, when he robbed us of our complacency by a criticism of the quite generally accepted single-salary-schedule movement. In order to assure the highest type of professional service in education, it may well be that we shall have to recognize what he calls the clear evidences of differentiation in teaching. Just as in medicine, in architecture, in engineering, we see lines of differentiation ranging from the merely technical to the highly creative and constructive pursuits, so we may have to see in teaching a wide range of differentiation.

In the third place, we have come to see the extensive implications of the problems we have often rather glibly termed "financial." Beginning students in the field of public school administration often insist that they be shown how to make a budget. Now as a matter of fact, we are not concerned about a budget but about sane budgetary procedure, and that involves (1) a dynamic philosophy of education, (2) a sound educational policy, (3) the determination upon adequate educational procedures, (4) constant appraisal, and (5) constant readjustment and realignment in social service. Such larger duties call not for a mere educational technician but for the services of the most expert educational engineer. In many an Illinois city what seems to be a simple problem of the amortization of indebtedness proves to be the very unpleasant one of facing utter and irrevocable bankruptcy which could have been avoided very easily by intelligent planning.

Whether we look, then, at the problems of curriculum, of personnel, of building, of supply and equipment management, at health, guidance, transportation, we are always confronted by the same demands for intelligent skepticism, intelligent optimism, and intelligent courage. In the unmistakable evidence of this fine professional attitude and mental temper among public school administrators we have the most marked trend in the field of public school administration.

Progressive Trends in Practical-Arts Education

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One of the largest and most significant factors in contemporary civilization is that known as the practical arts. By the term "practical arts" we mean all those activities of man relating (1) to the manufacture of tools, weapons, clothing, food, and shelter, (2) to the development and maintenance of means of trade, transportation, and communication, (3) to the discovery, gathering, and preparing of raw materials whether in the form of minerals or plant life, (4) to the growing of crops of all kinds, and (5) to the harnessing, control, and application of power. In short, by practical arts is meant all those arts of man that are not practiced merely for esthetic and spiritual ends. These we call "fine arts"; all other arts are said to be "practical."

Modern civilization is almost wholly the product of progress in the practical arts, and when man proudly speaks of the progress the race has made, he usually refers to the amazing developments that have occurred in these arts. Indeed, there are many thoughtful persons who find little evidence of marked progress during recent centuries in any other phase of human life. It is fitting, therefore, that the schools give much attention to practical-arts education, not only in order that a new generation shall be able better to practice these arts, but that it may come to understand and be able wisely to use the products of man's technical and mechanical genius. One sometimes wonders whether we have accumulated so great a discrepancy between the advancement of the practical arts and the lagging development of the moral and esthetic aspects of civilized life that a real danger exists, that may, in time, destroy us through our inability to utilize and control the things and physical forces we have developed and which we think of as marks of real progress. It seems imperative that our children be trained to understand and to utilize wisely the practical arts of modern life.

Two distinct phases of practical-arts education are recognized. In the first phase, courses are given in junior and senior high schools which have as their purpose the development of an understanding of the typical practical arts of contemporary life. These courses collectively are called "practical-arts courses," and include work in agriculture, commercial practice, home-making, and various industrial arts, all on the "non-vocational" level. Secondly, we have courses and schemes of training in these same fields of work, which are specifically vocational in character and are given for the sole purpose of training people of all ages above childhood successfully to practice vocationally the arts taught. The latter group of courses and training schemes may be given wholly in school, partly in school, or wholly in the vocations. These collectively are called "vocational education," and are designated "vocational-industrial education," "vocational-commercial education," "vocational-home-making education," etc.

In attempting to point out progressive trends in practical-arts education, it is necessary to treat these two main divisions separately. Let us first consider what is commonly called the "practical-arts courses," that is, the non-vocational, or cultural, type of practical-arts education. Very interesting changes have occurred in recent years in this phase of practical-arts education which seem to be in the direction of progress. Among them are: (1) a greatly enriched content, (2) greatly improved teaching techniques, (3) more effective course organization, (4) a wider range of offerings, (5) better methods of testing results, (6) better facilities, and (7) better prepared teachers.

Of these changes one of the most notable is that of the enrichment of course content. This has been particularly true in the case of industrial-arts courses. The old type of manual training, which placed the emphasis upon mere hand work and tool skills, is giving way to the more educative industrial arts with its emphasis upon information about modern industry. In the better schools, much time is given to essays and reports on technical subjects, class discussions, visits to factories, use of motion pictures, and the designing and making of work projects by the best modern methods of production. Courses so taught are intensely interesting, are educative in the best sense and, wherever they are found, the classes are crowded with students. Industrial-arts courses have probably made more progress in this particular than those of the other practical-arts subjects, because the distinction between practical-arts education of non-vocational character and that of vocational education seems to be more thoroughly understood by the industrial-arts teachers. The same trend, however, is also to be found in the other fields of work.

Methods of teaching in practical-arts courses have been under constant revision and study for many years. The war demand for rapidly trained people gave a renewed impetus to the investigation of teaching techniques, and today intelligent teachers have at hand highly efficient methods of instruction. The individual instruction sheet is coming to be universally adopted, and the methods of preparing and using such sheets have been most carefully studied and developed by men who are thoroughly qualified for experimental work. The results are remarkably satisfactory, and there is now no excuse for poor techniques in this field of education. Aside from the use of individual instruction sheets and other devices, the special applications of the principles of general method have also been well established by experience, and teachers who are students of their work need not lack knowledge of tested procedures in teaching their respective practical-arts subjects. A new test of teaching ability has been found during recent years in the administrative demand for large classes in practical-arts courses. This is a most difficult challenge to meet, but real progress is being made in adapting organization and teaching methods to the new conditions.

Steady progress is also being made in the organization of courses in harmony with objectives that are in keeping with democratic theories of education. Increasing emphasis is being placed upon definiteness of objectives, which are likewise appropriate to the activities of such courses. The former custom of setting up general objectives which might properly belong to any subjects of the curriculum has generally disappeared, and it is becoming common practice to make the objectives of the practical-arts courses the answer to such questions as this: "What should an American boy of junior-high-school age know about metal work, and what should he be able to do in metal work?" When a satisfactory answer is found, it becomes an objective which makes possible a very definite course organization. Considerable work is being carried on at the present time in an effort to develop a set of specific objectives in industrial arts which will make possible a much larger degree of standardization of courses throughout the country, than has hitherto been possible. This project is being fostered by the industrial-arts section of the American Vocational Association, and is already exerting a considerable influence upon junior-high-school courses throughout the country.

Another very marked trend in the practical-arts courses is an ever increasing range of fields treated. In home-making courses the offerings in cooking and sewing of an earlier period are being augmented by the study of the whole range of home-making problems. The recognition of the fact that the practical art of home-making means much more than cooking and sewing is one of the most important advances in that field since the advent of such work into the schools. Both agricultural courses and commercial courses show the same tendency, but it is perhaps most marked in the industrial-arts courses. In the larger schools, boys may now have experiences of the highest educative value in woodwork of two or three kinds,—i.e., sheet-metal work, machine-shop work, automechanics, aeronautic-mechanics, electrical work, printing, machine drawing, architectural drawing, and various other typical, modern practical arts. In the smaller schools the trend is shown in the rapid substitution of general shops for the traditional unit-wood shop. This tendency is most important and is clearly in the direction of making the school offerings in the practical arts more genuinely educative in the best sense, than they have been until now.

Again, the general interest in more reliable means of testing achievement has been felt by practical-arts teachers along with their colleagues of other fields. Splendid progress has been made in the development of objective tests both for technical information and for ability to perform manual skills. Several tests have been standardized, and the interest in the testing movement seems unabated among teachers of the practical arts. The activity in this direction apparently is having a marked effect in stimulating an interest in greater definiteness of objectives and of organization of courses and methods of teaching.

Finally, the practical-arts courses of the non-vocational type are coming increasingly to be taught by well-trained teachers. Since the beginning of such work in the schools this division of education has been sorely handicapped by ill-trained teachers. School administrators yet do not generally give the same serious consideration to the selection of practical-arts teachers that they do to the choosing of the teachers of academic subjects. This is greatly to be deplored. Increasingly, however, school boards are demanding college degrees of these teachers, and while there may be no inherent virtue in a college degree, to make such a demand greatly enhances the likelihood of securing the services of competent teachers. Teachers colleges and university colleges of education are now quite generally engaged in training practical-arts teachers, and there is small likelihood that trained men and women are not available for any school needing such teachers. Not only is a constantly increasing number of teachers beginning professional work with college degrees, but likewise many more than formerly are coming to the school with practical experience in the vocations that they represent. This is an encouraging tendency and can mean only better practical-arts instruction. On the whole, a most encouraging situation obtains in this phase of general education, and the near future promises much progress.

What progress is to be observed in the vocational-education division of practical-arts education? Vocational education has moved forward with remarkable speed in recent years. This is partly due to the stimulating effects of Federal aid for this work in the schools, and, in part, to the increasing realization of people everywhere that modern economic life makes efficient vocational training imperative. The traditional, leisurely, and expensive procedure of "picking up" a vocation by trial and error methods is rapidly coming to be seen as too costly both in time and money to be tolerated. Besides, a better understanding of the meaning of democracy is causing many to look askance at a public school system that will spend thousands of dollars upon the education of a boy who wants to be an engineer, and nothing on a boy who prefers to be a mechanic. In this division of practical-arts education, the clearest tendencies are: (1) the development of cooperative undertakings between the public schools and the vocations, (2) the development of a variety of other types of part-time education, (3) the growth of adult vocational education of subcollege grade, (4) the expansion of the range of occupations for which training is offered, and (5) the great improvement in teaching personnel and techniques. Historically, all vocational education was apprenticeship in some form, and a chief characteristic of all genuine apprenticeship is its processes of instruction partly through participation in productive enterprises, and partly through tuition. During an earlier period of the movement for the development of organized vocational education of below college grade, the attempt was made to provide full-time school instruction in several fields of work. But since the results of specific vocational training are much easier to measure than the results of general education, it early became clear that the full-time vocational school is not always a highly efficient means of specific training for the vocations. It is not improbable that such is the case in the realm of general education, but tradition is too powerful there for one with impunity to question the customary procedure. As a result of experience with the full-time school, modeled on the pattern of the traditional academic school, vocational education began experimenting with a scheme more nearly resembling genuine apprenticeship: namely, a part-time arrangement whereby the learner works part of the time under regular employment on productive work, for money, and part of the time he attends school to receive instruction in those aspects of his vocation that cannot efficiently be taught while engaged in commercial, or normal, vocational production. This scheme in its various forms is now generally recognized for most occupations as the most effective means of giving specific vocational education. The growth of the various contemporary forms of part-time vocational education is doubtless the most important factor in the progress of this phase of practical-arts education.

Other developments in part-time vocational education include the rapid expansion and improvement of evening schools, correspondence study, intensive slack-season courses, vestibule classes in offices, stores, and factories, and conference study-groups for adult workers. The development in these types of vocational education has been remarkable since the World War, and the growing interest in the vocational-training needs of adults appears as a characteristic feature of contemporary American education.

The sharpness of competition and the general demand for efficient service and better products, together with a larger view of the meaning of democracy in education, are rapidly increasing the number of vocations for which training is being provided. This trend is also one of the most striking features in the progress of practical-arts education, but the limits of my discourse will not permit an elaboration of this tendency.

Finally, the vital factor in any department of education—namely, the quality of the teaching personnel—is showing improvement to a degree that is most gratifying to all friends of vocational education. Due partly to efforts fostered by the Federal Board for Vocational Education and, in part, to the inherent conditions of the situation, a steady and marked advancement is evident in the instruction provided in this field. Teacher-training techniques, better procedures in the selection of teachers, and more skilful supervision are all contributing to the splendid progress observable in vocational education. Not least among the factors responsible for the improvement in instruction is the rapidly growing technical and professional literature in this field.

As American educators come more fully to envision a genuinely democratic education, practical-arts education, both in its general, or cultural, phases and in its vocational phases will inevitably come to play a larger part in the interest and effort of the public schools.